

Mining Form MR-500

S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT DIVISION OF MINING AND SOLID WASTE PERMITTING 2600 Bull Street, Columbia, SC 29201

Telephone Number: (803) 896-4261 Fax Number: (803) 896-4001

RECLAMATION PLAN DHEC FORM 500 DATE VERSION ADOPTED 7/1/94

As required in Section 48-20-90 of the South Carolina Mining Act, "An operator shall submit with his application for an operating permit a proposed reclamation plan. The reclamation plan for an operating permit only must be furnished to the local soil and water conservation district in which the mining operation is to be conducted. The plan must include as a minimum each of the elements specified in the definition of 'reclamation plan' in Section 48-20-40 and information required by the department. The reclamation plan must provide that reclamation activities, particularly those relating to control of erosion, to the extent feasible, must be conducted simultaneously with mining operations and be initiated at the earliest practicable time after completion or termination of mining on a segment of the permitted land. The plan must provide that reclamation activities must be completed within two years after completion or termination of mining on each segment of the area for which an operation permit is requested unless a longer period specifically is permitted by the department."

1. Name of Company: L	aurel Oaks Planta	tion, LLC				
	Name of Proposed Mine: Laurel Oaks			County: Charleston		
3. Home Office Address:	P.O. Box 63535, 3	3691 Paramount Drive		(843) 5	72-0088	
	(Street and P.O. Box)			(Teleph	one No.)	
North	Charleston	SC		(843)	553-1390	
	(City)	(State)	(Zip Code)	(Fax No.)	
4. Local Office Address:						
	(Street <u>and</u> P.O. Box)			(Telepho	ne No.)	
	(City)	(State)	(Zip Code)	(Fax No.)		
		be the contact for official business aging Partner - VP				
6. Location of Mine: Old	l Jacksonboro Rd ((s-10-1845)	Ravene	1		
State or County Hwy No.			Nearest Town or City			

II. ENVIRONMENTAL PROTECTION

1. Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation.

*See attached

2. Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources.

No adverse effects on adjacent surface water are anticipated. All runoff will be returned to the mine pit. Excess water will be pumped from pit to a settling/sediment pond and will drain across natural terrain to wetlands.

3. Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.

There are no known cultural or historic sites within the boundaries of the proposed mine site.

Describe method to prevent or eliminate conditions that conditions that conditions that conditions area.	ould be hazardous to animal or fish life in or adjacent to the
It is anticipated that no condition or fish life will develop as a re	ions that could be hazardous to animal esult of the mining activity.
Describe how applicant will comply with State air quality a Department of Health and Environmental Control. Plant control will be hardled using	nd water quality standards as established by the S.C.
	ment pond, and then outfall via natural
RECLAMATION OF AFFECTED AREA	
6. State useful purpose(s) the affected land is being propose but information should be submitted to support the feasibility	
a. Lake or pond	f. Grassland
b. Agriculture	g. Recreation
c. Woodlands	h. Wetlands
d. Residential	i. Park
e. Commercial	j. Other
7. State the final maximum surface gradient(s) (slope) in soil Surface gradients steeper than 3H:1V (18 degrees or 33 p studies to demonstrate that the steeper slopes will remain 3H:1V	ercent) may be required to submit geotechnical data and
there is adequate material to accomplish the stated final gra- outside the permitted area, state the nature of the material by grading, show that there is adequate area for grading to line and edge of highwall). Operator should show calculations adequate materials in backfilling and grading to meet the	·
pond edges. As the pond is dug the	ed using the onsite overburden along ne slopes will be backfilled with gs from jobsites. Any shortage of g existing material from the pit.
	ent of affected area(s). The revegetation plan shall include but preparation and fertilization; (c) seed or plant selection; (d) rate

III.

and fertilizing will be as per our consultants' recommendations.
Regrading and reseeding will continue until an adequate stand of grass
is established.

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The plan is to use the existing topsoil to cover the slopes to the future water level. The topsoil will be tested, graded, limed and fertilized as needed and then hydro seeded. Rate of seeding, liming

10.	. Provide, as a separate document, a closure plan of the mine and permitted facilities to prevent a release of contaminants
	from being harmful to the environment. A closure plan is not necessary for all mines, but is required where the possibility
	exists for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit has
	discharge limitation parameters other than pH and Total Suspended Solids (TSS); (c) chemically treated tailings or
	stockpiles (excludes fertilizer or lime for revegetation purposes).

Not applicable

11. Method of control of contaminants and disposal of mine waste soil, rock, mineral, scrap, tailings, slimes, and other material directly connected with the mining, cleaning, and preparation of mineral substances mined and includes all waste materials deposited on or in the permit area from any source.

There will be no contaminants, waste soil, rock, minerals, scrap, tailings, slime, or other material produced that will necessitate disposal.

12. Method of reclaiming settling and/or sediment ponds.

The sediment pond will be reclaimed as part of the lakes.

13. Describe method of restoration or establishment of stream channels, stream banks and site drainage to a condition minimizing erosion, siltation and other pollution.

There is no need to restore stream channels or stream banks as the site currently has neither. Drainage for areas of disturbance will be routed to the lakes, and subsequently through the sediment basin until permanent grassing is established.

14. What are the maintenance plans to insure that the reclamation practices established on the affected land will not deteriorate before released by the Department?

Natural vegetation will be used as primary ground cover with additional planting in sparse growth areas. With this planting/reclamation scheme it is unlikely that there will be any deterioration before release. Periodic inspections, regrading, and hydro seeding will continue until permanent growth is established.

15. For final reclamation, submit information about practices to provide for safety to persons and to adjoining property in all excavations. Identify areas of potential danger (vertical walls, unstable slopes, unstable surface on clay slimes, etc.) and provide appropriate safety provisions. These provisions can include but are not limited to setbacks, fencing,

*See attached

16. What provisions will be taken to prevent noxious, odious, or foul pools of water from collecting and remaining on the mined area? For mines to be reclaimed as lakes or ponds, provide supporting information that a minimum water depth of four (4) feet on at least fifty percent (50%) of the pond surface area can be maintained.

The site consists of sandy material that will perk well. Dewatering and surface drainage will handle any standing water. Neighboring lakes normal water elevations indicate that normal water elevations are 4-5 feet below existing grade. With an excavation of approximately 30 feet this would give us a water depth of 25-26 feet.

17. Identify any structures (e.g. buildings, roads) that are proposed to remain as part of final reclamation. Provide justification for leaving any structures.

No structures will be left behind.

- 18. Attach two (2) copies of a map of the area (referred to as the RECLAMATION MAP) that shows the reclamation practices and conservation practices to be implemented. The following should be shown:
 - A. The outline of the proposed final limits of the excavation during the number of years for which the permit is requested.
 - B. The approximate final surface gradient(s) and contour(s) of the area to be reclaimed. This would include the sides and bottoms of mines reclaimed ponds and lakes.
 - C. The outline of the tailings disposal area.
 - D. The outline of disposal areas for spoil and refuse (exclusive of tailings ponds).
 - E. The approximate location of the mean shore line of any impoundment or water body and inlet and/or outlet structures which will remain upon final reclamation.
 - F. The approximate locations of access roads, haul roads, ramps or buildings which will remain upon final reclamation.
 - G. The approximate locations of various vegetative treatments.
 - H. The proposed locations of re-established streams, ditches or drainage channels to provide for site drainage.
 - I. The proposed locations of diversions, terraces, silt fences, brush barriers or other Best Management Practices to be used for preventing or controlling erosion and off-site siltation.
 - J. Proposed locations of the measures to provide safety to persons and adjoining property.
 - K. Segments of the mine that can be mined and reclaimed as an ongoing basis.
 - L. The boundaries of the permitted area.
 - M. The boundaries of the affected area for the anticipated life of the mine.
 - N. The boundaries of the 100-year floodplain, where appropriate.
 - O. Identify sections of mine where the final surface gradient will be achieved by grading and/or backfilling.
 - P. A legend showing the name of the applicant, the name of the proposed mine, the north arrow, the county, the scale, the date of preparation and the name and title of the person who prepared the map.

THE REQUIRED RECLAMATION MAP SHALL HAVE A NEAT, LEGIBLE APPEARANCE AND BE OF SUFFICIENT SCALE TO CLEARLY SHOW THE REQUIRED INFORMATION LISTED ABOVE. THE BASE FOR THE MAP SHALL BE EITHER A SPECIALLY PREPARED LINE DRAWING, AERIAL PHOTOGRAPH, ENLARGED USGS TOPOGRAPHIC MAP OR A RECENTLY PREPARED PLAT. RECLAMATION MAP SHOULD BE THE SAME SCALE USED FOR THE SITE MAP.

IV. SCHEDULE FOR IMPLEMENTATION OF CONSERVATION AND RECLAMATION PRACTICES

19. As stated in Section 48-20-90 of the S.C. Mining Act, reclamation activities, to the extent feasible, must be conducted simultaneously with mining operations. Identify which areas or segments of the mine are not feasible to reclaim simultaneously with mining. Provide reasons why reclamation can not proceed simultaneously with mining in these areas.
N/A

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20. Section 48-20-40(16)(I) of the S.C. Mining Act requires a "time schedule, including the anticipated years for completion of reclamation by segments." This time schedule should meet the requirements of Section 48-20-90 of the Mining Act.

SCHEDULE FOR IMPLEMENTING CONSERVATION AND RECLAMATION PRACTICES

Conservation & Reclamation	Segment #	Planned *Applied		plied	Notes	
Practices	or Area	Amount	Year	Amount	Month/Year	Notes
nstall Survey Control	PA		2010			See Note 1
ost Warning Signs	PL		2010			Maintain LOM
lark setbacks	WL, PL		2010			See Note 2 - maintain LOM
nstall gate, apron	Access Road		2010			See Note 3 - maintain LOM
Maintain Access Roads			2010			Maintain LOM
nstall BMP's		- House of the second s	2010			See Note 4 - maintain LOM
nstall Sed & Holding		0.5	2010			Maintain LOM
lear, construct berm,	Pit		2010			See Note 4, maintain LOM
Grade, Fertilize, seed	Rim of Pit					See Note 5
Inspect, repair, Maint	PA		2015	,		Until release by the Department
				The state of the s		
	, <u>, , , , , , , , , , , , , , , , , , </u>					

* Completed by the Depart	tmont				***	

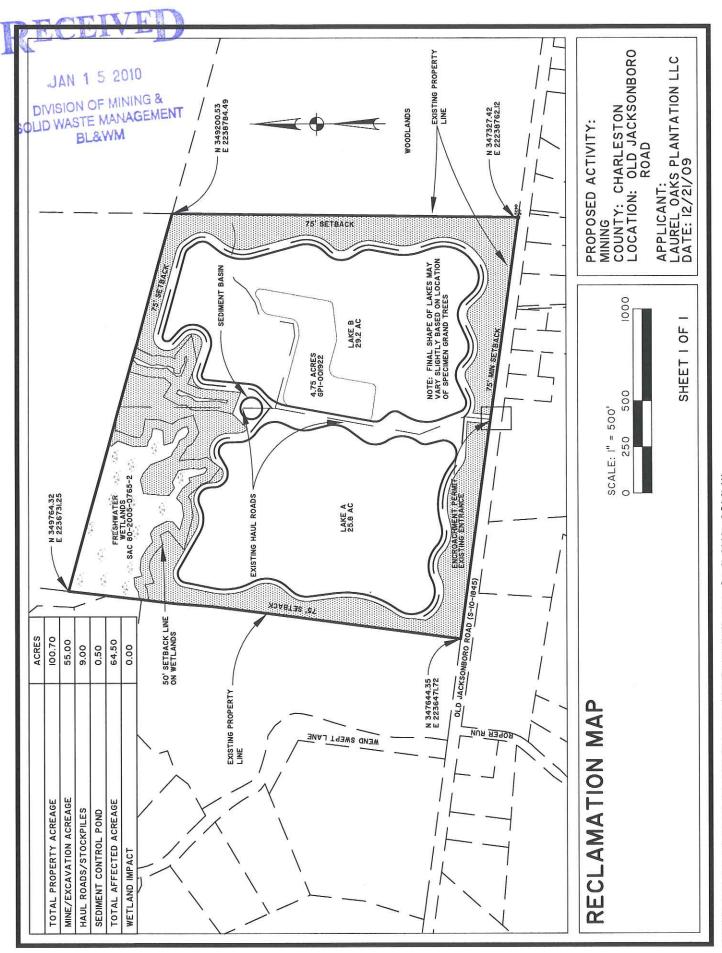
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YOU ARE NOTIFIED THAT:	
You, the operator, must file an application to modify the reclamation plan in the event actual reclamation forth hereinabove; and	varies from the set
2) If at any time it appears to the Department that the activities under the reclamation plan are failing to ach and requirements of the S.C. Mining Act, the Department may modify the RECLAMATION PLAN in account 48-20-150. Signature of Applicant/Operator or his Authorized Representative Printed Name of Applicant/Operator or his Authorized Representative Title 1/8/10 Date	nieve the purposes ordance to Section
Department Use Only	
Permit No.: Date Application Approved: Date Bond Rec'd:	
Bond Amount: Blanket or Single Bond: Permit Issuance Date:	
ACTION TAKEN ON THIS RECLAMATION PLAN	
Approved DeniedApproved with Additional Terms and Conditions	
By: DIVISION DIRECTOR	
Date:	
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Reclamation Supplemental Responses Attachment

- 1. There are no crop lands on or adjacent to the site. A natural buffer will be left between the mine site and adjoining state roads. One existing haul road will be used for ingress and egress. Natural buffers will be maintained along remaining wetlands and woodlands.
- 15. The mine site has low density residential to the west and south across Old Jacksonboro Road, and large expanses of forested woodlands to the north and east. Setbacks (in addition to the distance to the residential areas), locked gates, and no trespassing signs should protect the site from unwanted visitors. Maintaining slopes, berms, and traffic control will provide operational safety.



N:\I8016\dwg\Laurel Oak Plantation\Permits\55 Acre Mine\POI-ReclamationMap.dwg - Dec 21, 2009 - 8:54:21 AM